TECHNICAL MEMORANDUM

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

TO: Carl Bach, The Boeing Company

FROM: Colette Griffith and Kristy J. Hendrickson, P.E.

DATE: September 1, 2010

RE: WORK PLAN ADDENDUM NO. 1
CONCRETE JOINT REMOVAL
NORTH BOEING FIELD
SEATTLE, WASHINGTON

This technical memorandum is Addendum No. 1 to the June 29, 2010 *Work Plan, Concrete Joint Removal, North Boeing Field, Seattle, Washington* (Work Plan; Landau Associates 2010). Results of the North Lateral Source Evaluation (NLSE) indicate polychlorinated biphenyls (PCBs) are present in paint, caulk, and other building materials found at North Boeing Field (NBF). The Boeing Company (Boeing) plans to conduct abatement of materials in the Propulsion Engineering Labs area including paint, caulk, and other building materials in general accordance with the procedures described in the Work Plan. Abatement of materials that have been identified during the NLSE as having PCB concentrations greater than or equal to 50 milligrams per kilogram (mg/kg) will be performed in accordance with the Toxic Substances Control Act (TSCA) requirements described in the Work Plan.

This addendum has been prepared to provide information on how abatement of the additional TSCA waste listed in the sections below will be conducted as part of the activities described in the Work Plan. Abatement may include treatment or removal and disposal of TSCA waste at NBF. The complete results from the NLSE, including the samples described in this addendum, will be provided in a separate data report.

TSCA MATERIALS IDENTIFIED DURING THE NLSE

During the NLSE, 152 solids samples (including paint chips, building caulk, asphalt, concrete, and other building materials) were collected throughout the North Lateral. Of these, only nine samples had PCB concentrations greater than or equal to 50 mg/kg. Those sample locations and PCB concentrations are provided in the table below:

Sample Location	Description	PCB Concentration
PAINT08	Paint chips collected from yellow bollards at northwest corner of the 3-353 building	1,700 mg/kg
PAINT38	Paint chips collected from yellow bollards near northwest corner of cylinder tanks near the 3-323 building	750 mg/kg
PAINT60	Paint chips collected from the base of the white tanks at the southeast corner of the 3-334 building	98 mg/kg
PAINT61	Paint chips collected from the light green/beige metal support pillars at the southeast corner of the 3-334 building	136 mg/kg
PAINT65	Paint chips collected from the exterior siding near the northwest corner of the 3-322 building	250 mg/kg
PAINT70	Paint chips collected from the concrete wall on the north side of the roof of the 3-322 building	160 mg/kg
PAINT74	Paint chips collected from yellow bollards near door W3 on the west side of the 3-326 building	2,300 mg/kg
CAULK20	Caulk material collected from the window seal south of door E1 on the east side of the 3-326 building	14,000 mg/kg
MAT06	Unknown material of foam and rubber-like consistency collected in between doors S6 and S5 along the base of the 3-626 building	15,800 mg/kg

BUILDING MATERIAL ABATEMENT

Boeing is developing an abatement program for the handling, treatment, and removal and disposal of the materials identified in the table above. As part of the abatement program, Boeing will develop procedures to identify other similar building materials to the ones listed above. The TSCA waste to be covered under this work plan is not limited to those locations listed in the table above, and may include other similar building materials identified in the North Lateral and other areas of the NBF site. Additional sampling of building materials will take place as Boeing continues to characterize these materials for abatement. Boeing will remove or treat all of the accessible material identified as TSCA waste. Specific abatement procedures for paint are currently in development. Abatement activities will not compromise the integrity of the building structures on which the TSCA waste is present.

RUNOFF CONTROL, MANAGEMENT OF WASTE, AND DECONTAMINATION

Runoff control, management of waste, and decontamination procedures for the abatement of the building materials identified as TSCA waste will conform to the procedures described in Sections 3.2, 3.3, and 3.4 of the Work Plan.

Runoff control measures will be implemented to capture wastewater, slurry, and debris generated during removal or treatment of building materials and to prevent the materials from entering the stormwater drainage system. Control measures to be implemented will include the use of air-powered drum vacuums with particulate filters and dust control mitigation, and catch basin filters and other control

devices. To the extent possible, removal of PCB-containing building materials will not be conducted during periods of significant rain. Runoff control measures are described in detail in Section 3.2 of the Work Plan.

All wastewater generated during removal of PCB-containing building materials and wastewater generated during decontamination activities will be contained and properly managed as remediation waste under TSCA in accordance with the self-implementing requirements in 40 C.F.R 761.61(a). Treated wastewater that meets the NBF Sweeper Decant Station's discharge limits, as required by Boeing's King County Industrial Waste Permit, will be discharged to the sanitary sewer. All solid waste containing PCBs greater than 50 mg/kg will be contained in drums, cubic yard boxes, or lined roll-off boxes and disposed of at the Waste Management NW landfill in Arlington, Oregon, a chemical waste landfill permitted under 40 C.F.R. § 761.75 to accept TSCA waste. Management of waste is described in detail in Section 3.3 of the Work Plan.

Non-disposable and nonporous equipment such as concrete saws, pressure washers, drum vacuums, and small tools that come into contact with TSCA waste will be decontaminated after each use in accordance with the decontamination procedures required under 40 C.F.R. § 761.79, or will be discarded as contaminated TSCA waste and placed in a roll-off box to be disposed of at a Subtitle C chemical waste landfill permitted to accept TSCA waste under 40 C.F.R. § 761.75. All wastewater generated during decontamination will be collected and treated as described in Section 3.3 of the Work Plan. Decontamination procedures are described in detail in Section 3.4 of the Work Plan.

HEALTH AND SAFETY PLAN

The project health and safety plan (HASP) provided in the Work Plan will be applicable to all activities performed under this addendum. The health and safety plan is provided in Appendix A of the Work Plan. All personnel performing the work will follow the procedures described in this HASP or follow procedures in a HASP that is at least as protective as this plan.

SCHEDULE

Boeing plans to conduct ongoing abatement of PCB-contaminated building materials as they are discovered. Additional samples of building materials will be collected throughout the course of abatement to further define materials of concern. Documentation of abatement activities will be provided to the regulatory agencies on a periodic basis.

REFERENCES

Landau Associates. 2010. *Work Plan, Concrete Joint Removal, North Boeing Field, Seattle, Washington*. June 29.